User manual for the Optogate models PB-05 / PB-06 / PB-07 revised 5/9/06

No time for manuals? No problem, this will take only 3 minutes of your time to read it and you will have more fun and success with your new Optogate device. The Optogates were designed for professional applications and to be used by experienced sound engineers and technicians.

The Optogates work with 48V phantom power. Just switch on the 48V on the console and the Optogate is active. The phantom power passes through the Optogate and to the microphone. If you use dynamic mics you can "remote control" the unit with the phantom power switch. The microphone is switched **on** when the phantom power is switched off. Before turning on or off the phantom power please mute the channel in order to prevent switching noise.

You have already found 3 LED devices on one side, depending on what model you chose. The middle device is a red status LED. It indicates if somebody is in front of the unit and the microphone is switched on. The outer LED's are the infrared transmitter and the receiver. The transmitter will send 16 pulses per second if the phantom power is switched on. The Optogate will switch the mic on if there is any signal reflected from a surface back to the receiver. The receiver uses a 3 bit code in order to reduce false triggering from random infrared signals on the stage like par cans, moving lights etc.

The distance from the mic to the performer in which the unit opens and closes is adjustable with the help of a 12-turn spindle potentiometer inside. On all units the distance will increase by turning the pot to the right for a maximum distance of about 4 feet and will decrease the distance by turning the pot to the left. Please be aware that some dark materials are not able to reflect infrared signals back very well, which in turn might decrease the distance. Please experiment with the potentiometer to fine-tune the distance together with the performer before using live. It also would be helpful to have your show lighting active while adjusting. The width of the sensor is about 15 degrees wide from the unit. The mic will be switched off if the artist moves out of this angle.

When you turn the pot to the left eventually you will hear a light click of a spring. You cannot overturn the pot. You are now at the shortest distance range. When you start to turn the pot clockwise, you will find that the distance range will change very slowly in the first few turns. After a few turns, the distance will change more rapidly until you reach the maximum range. **If you turn the potentiometer clockwise (right) out of the useable area, the Optogate will switch off completely. If this happens, just turn the pot slightly to the left until the Optogate turns back on.**

We suggest that the engineer work with each performer to explain the operation of the unit and then set the range of the Optogate to fit his or her mic technique and stage set-up. As a rule the closer the performer is to the mic, the better the results will be due to eliminating the concert lighting variables.

The Optogates work well with dynamic mics and condenser mics up to 5.5 mA. If you change the type of mic you are using on the Optogate you may need to adjust the potentiometer again due to the different current consumptions of different mics. The spindle pot will cover a wide range of mics. The distance range of the Optogate can change a bit when the ambient light changes. Like every other infrared device on the market the Optogate units do not work correctly if direct sunlight or other very high power infrared signals hits the sensor. That is in the "nature" of the infrared technology due to the random high power infrared spectrum in the sunlight. You can try it with your remote control of your home sound system. No infrared sensor of CD-players, TV's etc. will work in direct sunlight. If direct sunlight hits the sensor of the Optogate the distance will decrease until the mic will be switched off. The unit will work again if somebody moves between the sun and the sensor. Normally you can use the Optogates on almost every open-air stage without any problems. It is always a good idea to check the range of your Optogates when changing venues, especially outdoors with direct sunlight.

If you would like to assemble a plastic clip on your PB-07 you can use a 4 mm screw up to 5 mm inside of the PB-07 case. Do not use longer screws as to prevent touching the connectors and damaging them.

If you use a console with less than 48V phantom power or if your condenser mic needs more than 5.5 mA then just send the Optogate to us and we will modify it to work with your equipment, without any cost.

The Optogate devices were developed for use with professional equipment and should be used by only professional system engineers and operators. Please be aware that we are not responsible for any hazards or damages due to the using of the Optogate devices. The Optogate devices are registered under the number DE54933725 WEEE as B2B devices. We also declare that they conform to the CE and ROHS for the European market.

If you have further questions please don't hesitate to contact us at**: info@optogate.com.**